

CLAIMS

What is claimed is:

1 1. A promoter of the CD11d gene comprising all or a functional
2 portion of isolated or recombinant SEQ ID NO:1, such that the sequence is
3 sufficient to direct myeloid cell specific expression of a gene.

1 Sub 826 2. The promoter of the CD11d gene according to claim 1,
2 wherein the functional portion is selected from the group consisting of -946 to +74
3 of SEQ ID NO:1, and -173 to +74 of SEQ ID NO:1.

1 3. The promoter of the CD11d gene according to claim 1,
2 wherein the sequence comprises one or more modifications, such that the modified
3 sequence retains sufficient activity to direct myeloid cell specific expression of a
4 gene.

1 4. The promoter of the CD11d gene according to claim 2,
2 wherein the sequence comprises one or more modifications, such that the modified
3 sequence retains sufficient activity to direct myeloid cell specific expression of a
4 gene.

1 5. A promoter of the CD11d gene comprising an isolated or
2 recombinant double-stranded DNA molecule wherein one of the strands hybridizes
3 to all or a functional portion of SEQ ID NO:1.

1 Sub 827 6. The promoter of the CD11d gene according to claim 5,
2 wherein one of the strands of the DNA hybridizes to all or a functional portion of a
3 sequence selected from the group consisting of -946 to +74 of SEQ ID NO:1, and
4 -173 to +74 of SEQ ID NO:1.

1 7. A *cis*-acting element that influences the activity of a myeloid
2 cell specific promoter, comprising a functional portion of isolated or recombinant
3 SEQ ID NO:1, such that the element is sufficient to influence the activity of a
4 myeloid cell specific promoter.

1 ~~Sub 328~~ 8. The *cis*-acting element according to claim 7, wherein the *cis*-
2 acting element is the -946 to +74 region of SEQ ID NO:1.

1 9. The *cis*-acting element according to claim 7, wherein the *cis*-
2 acting element is the -173 to +74 region of SEQ ID NO:1.

1 10. The *cis*-acting element according to claim 7, wherein the *cis*-
2 acting element is the -72 to -40 region of SEQ ID NO:1.

1 11. The *cis*-acting element according to claim 7, wherein the *cis*-
2 acting element comprises one or more modifications, such that the modified element
3 retains sufficient activity to enhance the activity of a myeloid cell specific promoter.

1 12. The *cis*-acting element according to claim 7, wherein the *cis*-
2 acting element is a binding site for a transcription factor.

1 13. The *cis*-acting element according to claim 12, wherein the *cis*-
2 acting element is a binding site for Sp1.

1 ~~Sub 329~~ 14. The *cis*-acting element according to claim 13, wherein the
2 binding site for Sp1 is the -63 to -40 (5') region of SEQ ID NO:1.

1 15. The *cis*-acting element according to claim 7, wherein the *cis*-
2 acting element is a myeloid cell specific silencer element.

1 ~~Sub 330~~ 16. The *cis*-acting element according to claim 15, wherein the *cis*-
2 acting element is the -591 to -378 region of SEQ ID NO:1.

23. The cell specific CD11d promoter-heterologous gene construct according to claim 18, wherein the *cis*-acting element is the -946 to +74 region of SEQ ID NO:1.

31. The cell specific CD11d promoter-heterologous gene construct according to claim 18, wherein the *cis*-acting element is the -591 to -378 region of SEQ ID NO:1.

3 (a) positioning a gene of interest so that it is functionally
4 controlled by the promoter of claim 1; and
5 (b) expressing the gene of interest.

1 41. A method of expression for myeloid cell specific genes,
2 comprising:

- 3 (a) positioning a gene of interest so that it is functionally
4 controlled by the promoter of claim 2; and
5 (b) expressing the gene of interest.

1 ~~42.~~ A method for identifying regulating factors of myeloid cell
2 specific transcription, comprising:

- 3 (a) contacting a myeloid cell which contains a heterologous gene
4 under the transcriptional control of a CD11d promoter with a selected factor,
5 wherein the promoter comprises all or a functional portion of isolated or
6 recombinant SEQ ID NO:1, such that the sequence is sufficient to direct myeloid
7 cell specific expression of the heterologous gene; and
8 (b) assaying for expression of the heterologous gene and
9 comparing its expression in cells contacted with the factor with expression of the
10 gene in cells not contacted with the factor, and thereby determining whether the
11 expression pattern of the heterologous gene is altered in cells contacted with the
12 factor as compared to that of cells which have not been contacted with the factor.

1 ~~43.~~ A *cis*-acting element that influences the activity of a myeloid
2 cell specific promoter, comprising a functional portion of isolated or recombinant
3 SEQ ID NO:³~~2~~, such that the element is sufficient to influence the activity of a
4 myeloid cell specific promoter.

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